

Scaphoideus tergatus, n. sp.

Resembling *luteolus* in general appearance but with elytra more mottled and with male oedagus more slender on apical portion and with apex curving ventrally. Length 5.5–6 mm.

Vertex strongly produced, a little longer at middle than width between eyes.

Color: Vertex white, with a very narrow brown marginal line usually slightly interrupted at middle, and a broad testaceous transverse band between anterior margins of eyes, scarcely produced at middle. Pronotum testaceous with a white transverse band on middle. Scutellum testaceous, apical third white with a black spot on either side of apical spine. Elytra dark brown, veins on clavus indistinct, veins on corium and costa brown, apical portion black, very few pale areas. Face pale with two dark arcs.

Genitalia: Female last ventral segment long, apical third of posterior margin produced in a short, broad rounded black tooth. Male oedagus in lateral view with ventral portion narrow, widened at junction of dorsal portion, apex gradually narrowed to pointed tip which is curved slightly ventrally.

Holotype male, allotype female collected at State Forest, Jonesboro, Illinois, July 31, 1934 (DeLong and Mohr), in Illinois Natural History Collection. Female paratypes same date and locality and from Havana, Illinois, August 30, 1917, in Illinois Natural History Survey collection and in the author's collection.

**NEW SPECIES AND A NEW GENUS OF NEARCTIC
SIPHONAPTERA.**

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The following descriptions of three new species and a new genus are based upon material in the United States National Museum, to whose authorities the writer is indebted for the privilege of studying their extensive collections of fleas. Particular thanks are due to Dr. H. E. Ewing for his helpful advice and assistance.

FAMILY DOLICHOPSYLLIDAE.

Trichopsylla floridensis, new species. (Fig. 6.)

Male.—Frons broadly rounded with a conspicuous frontal tubercle. The preantennal region of the head with 2 rows of bristles; the upper or frontal row consists of 6 bristles, while the lower or ocular row consists of 4 very long and stout ones arranged in an almost vertical line. Eyes prominent, well pigmented, and round. The genal process is highly pigmented and pointed. First segment of the antenna with numerous small setae in a longitudinal row; apically it is

provided with 8 or 10 larger setae in a transverse row. Second segment of the antenna with a transverse row of about 8 small setae and several long bristles about as long as the third segment. The postantennal region of the head is armed with three irregular rows of bristles; the first consists of 3 stout bristles, the second of 5, and the third or marginal row of about 9 long bristles, which alternate with about 7 small setae. The labial palpi 5-segmented and reaching to about two-thirds of the fore coxa. The maxillae are not broad and come to a rather abrupt point. The dorsal region of the head and thorax is provided with a conspicuous pubescence. Neither a genal nor a pronotal ctenidium is present. The pronotum bears a marginal row of about 8 bristles on a side and a patch of bristles dorsally. Both the meso- and metanotum bear two irregular rows of bristles of which the posterior consists of longer and more robust elements than the anterior. The metepimeron is armed on its posterior margin with about 6 long bristles anterior to which is an irregular row of 5 or 6 shorter bristles. The abdominal tergites have two rows of bristles, the posterior of which is made up of long bristles reaching to the spiracles of the next segment, while the anterior row consists of much shorter bristles. The spiracles are large, round, and conspicuous. Antepygidial bristles are absent. The fore coxa is armed with numerous bristles longitudinally arranged. The hind coxa bears a patch of bristles at the apical half near the anterior margin. Each femur has a row of about 15 bristles near the anterior margin on both the outer and inner surfaces. Each tibia bears a longitudinal row of about a dozen bristles on the outer surface, and also on the posterior margin about 6 pairs of stout bristles, each pair consisting of a long bristle and a short bristle. The tarsi are richly supplied with spine-like bristles. The last tarsal segment bears 4 pairs of stout lateral plantar bristles. *Modified segments*.—The clasper is broad and flat. Its dorsal margin bears a row of numerous long bristles; in addition there are numerous long slender setae on the anterior and posterior margins. The process of the clasper is not distinctly separated from the body proper. The manubrium is finger-like and ends bluntly. The movable finger is long and curved. The penis does not end in a sharp point but is blunt terminally. The spring is long but does not complete a turn. For further details of the male genitalia see Fig. 6.

Female.—General structural details essentially as in the male except that the pubescence on the head and thorax which characterizes that sex is absent. The seventh sternite is deeply sinuate. The tail of the receptaculum seminis is longer than the head, which is oval and longer than wide.

Type locality.—Gainesville, Florida.

Type slide.—U. S. N. M. No. 52897.

The cotypes consist of 2 males and 2 females collected in garden truck leaf mold on September 30, 1935, at Gainesville, Florida. The true host is unknown.

This new species may be readily separated from *T. lotoris* Stewart by the chaetotaxy of the head and metepimeron.

Megabothris asio (Baker). (Fig. 3.)

Ceratophyllus asio Baker, 1904, Proc. United States Nat. Mus., Vol. XXVII, p. 406.

Megabothris asio Jordan, 1933, Nov. Zoo., Vol. XXXIX, p. 77.

Male.—Frontal tubercle small and acutely pointed. Preantennal region of the head with 2 rows of bristles; the upper or frontal row consists of 7 bristles of which those closest to the antennal groove are weakest, while the lower or ocular row is made up of 3 long bristles. Interspersed among these bristles are a number of minute setae. Eyes round and well pigmented. Postantennal region of the head armed with 2 rows of 4 or 5 bristles each, anterior to which is a single bristle close to the antennal groove. Along the posterior margin of the antennal groove is a series of about 15 small setae. Labial palpi 5-segmented and reaching to about four-fifths the length of the fore coxa. Pronotum armed with a marginal row of alternating strong and weak bristles, anterior to which is a single row of bristles. Pronotal ctenidium with 9 or 10 spines on a side. Meso- and metanotum each with a marginal row of long bristles anterior to which are 2 or 3 rows of weak ones. Abdominal tergites with 2 or 3 rows of bristles, and in the case of the first 4 tergites, 1 or 2 dorsal teeth on a side. Three antepygial bristles present on a side. Fifth tarsal segment of each leg with 5 pairs of lateral plantar bristles. *Modified Segments*.—Process of the clasper very long and tapering to a blunt termination. Manubrium short and broad. Penis slender, scimitar-like, ending in a curved point. Spring of the penis long and completing 1 or 2 large circles about the distal half of the penis. Movable finger prominent, with 2 short spiniform bristles at the apex and a longer bristle at the outer angle. Eighth sternite expanded apically and armed with a number of slender curved setae. For further details see Fig. 3.

Records.—Taken from *Microtus pennsylvanicus pennsylvanicus* (Ord) by C. N. Smith at the following localities in Massachusetts: Edgartown, June 14, 1936, male and female; Scraggy Neck, June 18, 1936, 2 females; Lamperts Cove, June 17, 1936, female; W. Falmouth, June 8, 1936, male and female; Nantucket, June 13, 1936, female, 2 males; Squibnocket, June 11, 1936, female. Taken from the same host species at Ruthven, Iowa, July, 1938, by E. R. Becker and P. C. Waters, 4 males and 8 females.

FAMILY HYSTRICHOPSYLLIDAE.

All the nearctic fleas hitherto included in the complex known under the generic name, *Ctenopsyllus* Kolenati (= *Leptopsylla* Jordan and Rothschild) seem to comprise a distinct genus easily separable from the type of the latter group by the character of the genal ctenidium. This new genus is herewith described.

PEROMYSCOPSYLLA, new genus.

Head subangulate in front; frontal tubercle inconspicuous. Anterior margin of the head with a series of bristles; 2, 3, or 4 of those near the frontal tubercle thickened and pigmented. Genal ctenidium more or less horizontal, consisting of 2 spines, varying in size and shape according to the species. Genal process

prominent, variable in shape. Labial palpus composed of 5 segments. Antepygidial bristles 3 or 4 on a side. Last segment of each tarsus with 4 pairs of lateral plantar bristles and a basal submedian pair.

Type species.—*Ctenopsyllus hesperomys* Baker.

***Peromyscopsylla spinifrons*, new species. (Figs. 1 and 2.)**

Male.—Frontal tubercle inconspicuous, acutely pointed. Anterior border of the head armed with 8 or 9 bristles, of which the first 3 in the vicinity of the frontal tubercle are sharp and spine-like. Five long bristles are situated on the dorsal region of the frons, while the lower frons bears 3 long and stout bristles. Irregularly scattered over the preantennal region are numerous small setae. The eyes are partially covered by the base of the second genal spine. The genal ctenidium consists of 2 well separated spines, of which the lower extends slightly more distad than the upper. The genal process is not spatulate, but rather slender and extends well beyond the rounded termination of the upper genal spine (Fig. 1). The first and second segments of the antenna are without distinct setae. The post-antennal region of the head bears 5 irregular rows of bristles. The first row consists of 2 bristles, the second of 3, the third of 4, the fourth of 5, and the fifth or marginal of 7. Along the posterior margin of the antennal groove is a series of about 8 small setae. The labial palpi are 5-segmented and reach to about one-half the length of the fore coxa. The maxillae are broad basally and taper abruptly to a long sharp point. The pronotum bears a single row of alternating long and short bristles, and a ctenidium of about 14 spines on a side. Both the meso- and metanotum are armed with numerous bristles which are arranged in 3 or 4 irregular rows. The abdominal tergites are armed with 2 rows of bristles and 1 tooth on a side. There are 3 antepygidial bristles, of which the middle is the longest. The fore coxa is armed with numerous long bristles on the outer surface, and a series of curved setae along the posterior margin. The hind coxa bears a patch of bristles near the anterior border apically. Each tibia is armed with about 13 stout bristles along the posterior margins. Among these are 3 long bristles, one situated at each end and one in the middle. The fifth segment of each tarsus is armed with 4 pairs of lateral plantar bristles. *Modified segments.*—The genitalia resemble somewhat those of *P. hamifer* (Rothschild) in general appearance. The movable finger, however, differs in shape, being widest near the middle and tapering apically, its anterior margin curving outward slightly below the middle. On the posterior margin the movable finger bears 3 robust bristles and 2 or 3 smaller ones, while its anterior margin is armed with about 5 weak bristles and a few small setae. Manubrium about as long as penis, slender and tapering to a point. Apex of the ninth sternite rather abruptly pointed, its posterior margin with 3 long bristles and a number of smaller ones. For further details concerning the structure of the male genitalia see Fig. 2.

Type locality.—Buttry's Cave, Jefferson City, Tennessee.

Type slide.—U. S. N. M. No. 52899.

Male holotype collected by J. D. Ives in Buttry's Cave, 400 ft. from entrance, Jefferson City, Tennessee, February 4, 1933. The true host is unknown.

Peromyscopsylla scotti, new species.

Female.—The general arrangement of the bristles of the head is essentially the same as in *P. hesperomys* (Baker). The genal ctenidium, however, consists of 2 spines of which the lower extends only slightly more distad than the upper. The genal process is spatulate and prominent (Fig. 5). Each abdominal tergite is armed with 1 to 3 short teeth on a side, with the anterior tergites usually having more teeth than the posterior. Four antepygial bristles are present on a side. Each of the posterior sternites is armed with a row of 4 or 5 long bristles. The seventh sternite, unlike that of *P. hesperomys*, is without a deep sinus and its margin is irregular in outline. The eighth sternite bears a patch of about a dozen bristles of which 6 or 7 are long and robust. The receptaculum seminis is of characteristic shape; its tail is about as long as the head, which is about twice as long as wide. For further details of the structure of the female genitalia see Fig. 4.

Type host and type locality.—White-footed mouse, *Peromyscus leucopus noveboracensis* (Fischer) ? at Dubuque, Iowa.

Type slide.—U. S. N. M. No. 52900.

Female holotype collected by T. G. Scott from the white-footed mouse at Dubuque, Iowa, November 4, 1937, in the United States National Museum. Female paratype bearing the same data in the author's private collection.

This new species may be readily distinguished from *P. hesperomys* (Baker) by the characters of the genal ctenidium and of the seventh sternite in the female.

EXPLANATION OF PLATE NO. 6.

FIG. 1.—*Peromyscopsylla spinifrons*, new species, genal ctenidium of male.

FIG. 2.—*Idem*, male genitalia.

FIG. 3.—*Megabothris asio* (Baker), male genitalia.

FIG. 4.—*Peromyscopsylla scotti*, new species, seventh sternite of female.

FIG. 5.—*Idem*, genal ctenidium of female.

FIG. 6.—*Trichopsylla floridensis*, new species, male genitalia.

